

**INTERPRETATIONS & APPLICATIONS
OF BUILDING CODES & REGULATIONS #98-4**



CODE SECTION : NEC Section 300-6

02/10/98 rev 03/08/02

SUBJECT : Section 300-6 CONDUIT PROTECTION

- (1) **IN CONCRETE.** Galvanized ferrous metal conduit and fittings shall be permitted in concrete above grade and in concrete resting on the ground provided a minimum concrete cover of two (2) inches (51 mm) is maintained.

Aluminum conduit, fittings, boxes, cable sheathing, cabinets, elbows, couplings, supports, and support hardware shall not be used in concrete.

- (2) **IN EARTH .** Ferrous or galvanized ferrous metal conduit installed in the earth shall be protected from corrosion with a factory applied coating or field applied coating in accordance with section 300-6(d). Cathodic protection shall be allowed to be used when substantiating data is provided by a qualified engineer.
- (3) **CORROSIVE AND/OR WET ATMOSPHERES.** Metals used must withstand the exposure involved. Conditions will be evaluated on individual basis.
- (4) **FIELD WRAPPING REQUIREMENTS** (Section 300-6)
- (A) **MATERIAL.** Material shall be based on the mil-GAUGE, film material, tensile strength, stretch, adhesion, chemical and physical resistance of film, dielectric strength and electrolytic corrosion. Approved materials shall include 10, 12, 14, and 20 mil polyvinyl or polyethylene tape.
 - (B) **SURFACE PREPARATION.** Oil, grease, rust, scale, moisture or other foreign material shall be removed by paint removers, caustic dips, hand tools, solvents (such as hexane, toluol, xylol, etc.) or other approved means. The conduit shall be free of all contaminates during the application of the wrapping.
 - (C) **PRIMING.** A coat of primer adhesive shall be applied over cleaned pipe when specified by the manufacturer's installation instructions of the wrapping material.
 - (D) **APPLICATION OF COATING.** Tapes shall be spirally wrapped so that the wrapping will have no channels or hollows that will enable moisture to contact the metal. The installed tape shall be half-lapped with enough layers to result in a minimum of 40 mil thickness.
EXCEPTION : Electrical conduits 1 inch and smaller shall be permitted to have a minimum of 20 mil thickness.
 - (E) **OVERWRAP.** Where the conduit exhibits evidence of damage to the factory coating, it shall be permitted to be overwrapped **using the "half-lap" method.**